

Martyn, B. D. F. R. S. Professor of Botany in the University of Cambridge, and Fellow of the Linnean Society. In a Letter addressed to the President.

Read October 6, 1789.

SIR,

I HAVE little doubt of your agreeing with me in opinion, that nothing has contributed more to the rapid progrefs which the fcience of Botany has made within the last thirty or forty years,

than the excellent language which Linnæus invented, and which has been by common confent adopted, not only by thole who follow the fyftematic arrangement of the illuftrious Swede, but by all who ftudy Botany as a fcience. Without pretending to any peculiar forefight, we may venture to affirm, that the Linnean language will continue to be in ufe, even though his fyftem fhould in after ages be neglected; and that it will be received into every country where the fcience of Botany is ftudied, with certain modifications adapting it refpectively to each vernacular tongue. So long as Botany was confined to the learned few, there was

no difficulty in using the terms of the Linnean language, exactly as the author had delivered it: but now that it is become a general purfuit, not only of the fcholar, but of fuch as have not had what is called a learned education; and fince the fair fex have U_2 adopted

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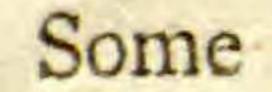
adopted it as a favourite amufement; it is become neceffary to have a language that fhall be fuitable to every rank and condition, a language that may be incorporated into the general fund, and carry with it the proper marks of the mother tongue into which it is to be received.

In order to attain this defirable end, I beg leave, Sir, to fubmit to your confideration, and to that of the fociety over which you prefide, these two fundamental principles : First, that we should adhere as closely as possible to the Linnean language itself: and fecondly, that we should adapt the terminations, plurals, compounds and derivatives, to the structure and genius of our sterling English. That we ought to adopt the Linnean terms themselves, is fufficiently apparent from the great advantage refulting from the ufe of one universal language. If we change or translate these terms, we lose all this advantage, and become unintelligible to botanists of every other nation, without any benefit gained on the other hand: for these new terms will be equally difficult even to the English student; and will require as much explanation as the Latin or Greek, many of which have prefcription and possession to plead in their defence. To load the fcience and our English tongue with a useless addition of new words, is certainly an evil to be avoided. Thus, for instance, in the parts of fructification, if we adopt the terms empalement, bloffom, chive, thread, tip, pointal, seed-bud, shaft, summit, they require explanation, in their appropriate fense, as much as calyx, corolla, stamen, filament, anthera, pistillum or pistil, germen or germ, style and stigma, which are already familiar to the ears of all who have studied the science of Botany, even though they have

little or no acquaintance with the learned languages. For the fame reafons legume is to be preferred to *fhell* or cod, *filiqua* or *filique* to pod, *filicle* to pouch, glume to hufk or chaff, culm to ftraw, digitate to fingered, ovate to egged, pinnatifid to feather-cleft.

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Some few English terms, it must be owned, were used by the learned Grew; such as *empalement*, *chive*, *femet* for *anther*, *pointell*, *ovary* for *germ*, and *knob* or *button* for *ftigma*: but these never made their way into the world, or became of general use. It is not necessary therefore to discuss the comparative merits of these terms with the Linnean; fince, after all, we must fubmit to the fupreme law in

these matters, general confent *: and when a Greek or Latin term has been once fanctioned by ufe, there can be no doubt but that it ought to be preferred even to a term originally English, which is either little known, or is applied to another fignification. It feems therefore upon the whole to be a defirable object, that all who talk or write of Botany in English, should keep as close as poffible to the Linnean language: nor does it feem liable to any material objection, if we proceed with difcretion and propriety, without violating the rules of common fenfe or of grammar. For instance, when there is a fignificant English term, which has been in long and general ufe, it ought to be preferred. Thus it would be absurd to put semen for seed, or folium for leaf : cell is preferable to loculament, partition to disseptment, and perhaps seed-vessel to pericarp. Opinions will differ upon the extent to which this exception to the general principle should be carried : but the original terms of the science in our language are so few, that it may very well be confined within a fmall compaís. There are however cafes, in which it feems advisable rather to invent a new English term, than to adopt the Linnean. Thus in the cafe of very long words, fuch as campaniform, infundibuliform, bypocrateriform, and other sesquipedalian terms, which give too great an

air of pedantry to the language, it will perhaps be thought better by

"Quem penes arbitrium est, et jus, et norma loquendi."

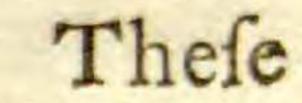
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most perfons to use bell-shaped, funnel-shaped, and salver-shaped; or bellform, funnel-form, and salver-form; our English tongue admitting compounds with great fuccefs and facility: especially fince these terms convey immediately to the English botanist a familiar idea of the feveral forms of the corolla, which they are intended to express.

When words also have already an appropriate fense in English, it feems better to translate them than to use the originals themfelves. Thus, although in Latin we fay caulis strictus or exasperatus, and folium exasperatum; yet it has an absurd found in English to talk of a strict or exasperated stalk, and of leaves being exasperated. On the contrary, it is still worfe, although it has not fo ridiculous a found, to drop the original Latin term, in order to adopt an English one before appropriated to another sense, and therefore only tending to create confusion. What I mean may be exemplified in the terms lanceolate and serrate, applied to leaves : these are become fufficiently familiar by use; but if not, the explanation must be referred to: whereas, if we use the words lanced and fawed, a novice might eafily be mifled; for having been accustomed to the ideas of a lanced gum and fawed wood, he will not readily apply the former to the shape of a lance's head; or the latter to the sharp notching round the edge of a leaf, refembling the teeth of a faw. There are likewife fome Latin words which do not perfectly affimilate to our language, and therefore are better tranflated. Such are teres and amplexicaulis. Now we cannot well fay in English tere or amplexicaul; but the first may frequently be translated round: this however will fometimes create a confusion, and columnar gives the

idea of teres most precifely; for when applied to a stem, or any of its fubdivisions, it signifies, not a cylindric, but a tapering form, like the shaft of a column. The second of these terms may be rendered, fignificantly enough, embracing or stem-clasping.



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These and other exceptions, which will readily present themfelves to any one who confiders the fubject, being admitted; the advantage of the science will be most effectually confulted by retaining the Linnean terms, whenever there is no cogent reason to the contrary. It is frequently even dangerous to fubstitute equivalent terms; or at least it requires the utmost caution, if we would avoid confusion. Thus, if we translate the two Linnean terms deciduus and caducus by the fame English word falling, two distinct ideas are confounded *: would it not therefore be better to use the two Latin terms, with an English termination, deciduous and caducous? Plumosus is rendered feathery; and pinnatus, feathered: but is not this confounding ideas totally diffinct? and are not therefore the terms plumous or rather plumose, and pinnated or rather pinnate, to be preferred? Dichotomus may be translated forked: but this English term implying no more than one division into two parts, does by no means fully express the idea of a stem continually and regularly dividing in pairs from the bottom to the top. Surely then dichotomous †

is preferable to forked.

But where shall we find English words to express all the variations of pubescence, which Linnæus has discriminated with so much nicety[‡]? Some of them indeed may very well admit of trans-

* Caducus fignifies a more quick or fudden falling off than deciduus. The calyx of the Poppy dropping before the corolla is unfolded, is faid to be *caducus*. In *Berberis*, and many plants of the clafs *Tetradynamia*, it falls off; but not till after the corolla is expanded : the calyx in this cafe is faid to be *deciduus*.

+ If the jus et norma loquendi would permit, I should be for rendering all Latin adjectives ending in us, by the English termination ous; and all such as end in ofus, by the termina-

tion ofe.

‡ As scabrities, lana, lanugo, villus, tomentum, pili, setæ, strigæ, hami, stimuli, aculei, furcæ, spinæ, &cc. and the adjectives derived from these and others; as lanatus, lanuginosus, villosus, tomentosus, pilosus, setaceus, strigosus, hamatus, aculeatus, furcatus, spinosus, scaber, birtus, hirsutus, bispidus, exasperatus, &c.

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lation*; but many will not. For instance, if we render scaber by the English word rough, how shall we distinguish it from a/per, which has the fame fignification? We are therefore reduced to the neceffity of rendering asper, rought; and of retaining most of the other Latin terms with English terminations, as scabrous, birsute, hispid, &c. unless we would wantonly load the fcience of Botany, and our English tongue, with terms newly invented or applied, which are not either more fignificant, or more eafy to be understood, than those which we are already in possession of. As to the fecond general principle, namely, that the terminations and plurals of our words, together with their compounds and derivatives, should be adapted to the structure and genius of the English language; it will not perhaps by many be thought of equal importance with the first. There is perhaps no language that is more irregular than ours, or that admits of more licenfe in many respects. This however is no reason why, in the formation of new terms, we should not follow fuch fundamental rules as we have, avoid irregularities as much as possible, and add no fresh barbarisms to those which already difgrace us. The well known Horatian rule ‡ must be our constant guide in the formation of our terminations and plurals; and analogy must be attended to in the structure of our compounds and derivatives. Thus nectary may be used for nectarium, pistil for pistillum, style for stylus, pericarp for pericarpium, receptacle for receptaculum, capsule for capsula, glume for gluma, culm

* As lana wool, pili hairs, setæ briftles, hami hooks, stimuli ftings, aculei prickles, spinæ thorns: lanatus may be rendered woolly, pilosus hairy, setaceus briftly, hamatus hooked,

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for culmus, &c. Some of these words, as nectarium and pericarpium, are become fo familiar to learned botanist, that they will perhaps hardly be perfuaded to give up the Latin termination. The final in a may be admitted more readily; and corolla having use on its fide, will doubtless be preferred by many to corol, which has not fo melodious a found. Naturalists talk familiarly of a butterfly's antenna; and cupola, which in the last century was confidered as a stranger, is in this admitted to be a denizen. I must observe, however, that by changing the final a into e, fome confusion will be avoided, which arifes from not diftinguishing the Latin feminine fingular from the neuter plural; and by using stipule for stipula, we thall no longer hear of a leaf-stalk or petiole having two stipula. But whatever allowance may be made in fingular terminations, the plurals must certainly follow the analogy of the English tongue; and if we tolerate corolla and anthera, nectarium and pericarpium, we cannot possibly allow of corollæ and antheræ, nectaria and pericarpia; but we must use either corollas or corols, antheras or anthers, nectariums or nectaries, pericarpiums or pericarps, according as we preferve the original term entire, or anglicize it. All derivatives and compounds ought to follow the analogy of the original words from which they are derived, or of which they are compounded. Thus from corol we regularly form corollet, as from crown, coronet : if we adopt the terms prickle and thorn, we must use the adjectives prickly and thorny, not aculeate and Spinose: from glume we form glumose; from ament, amentaceous; from aven, avened and awnless; from axil or axilla, axillary; from pinna, pinnate, bipinnate, &c. from calyx are formed calycle, calycled, calycine; from petal, anther, berry, we make the compounds five-petalled, anther-bearing, berrybearing, not bacciferous; from cell, two-celled; from leaf, two-leaved; from seed, two-seeded. Without, however, entering too much into the minuteness of this

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this fubject, fuffice it to remark, that when we admit terms of art or fcience to participate in the rights of citizens, they fhould put on our garb, and adopt our manners. If this rule had always been obferved, our language would not have been deformed with innumerable barbarifms, which learned and unlearned ignorance have joined to introduce among us; and which nothing but the conftant habit of fpeaking or hearing them, can ever reconcile to our ears*. It would be eafy to add many more obfervations, but it is not my defign to exhauft the fubject. I have addreffed thefe curfory remarks to you, Sir, as being at the head of a fociety, one of whofe principal views is to promote Englifh Botany ; in hopes that fome member of the fociety, who has more leifure than myfelf, may turn his thoughts to the fubject, and handle it fo fully, that all of us who are engaged in the fame purfuit, may fpeak the fame language.

I am,

Park Prospect, Westminster, October 5, 1789.

SIR, &c.

THO. MARTYN.

* Such are per cent, per annum, per pound, and per post; ipso facto, minutiæ, data, errata, in vacuo, vice versa, plus et minus, vis inertiæ, in equilibrio, jet d'eau, aqua fortis, aqua vitæ, ignis fatuus, cæteris paribus; equivoque, critique, je-ne-sçai-quoi, sçavoir-vivre, outré, et cetera, et cetera, et cetera.—It should seem that the mercantile world, the learned world, and the fashionable world, had formed a conspiracy to debase our sterling English by ill-made terms, affectedly introduced without the least necessity.

